FIG.1

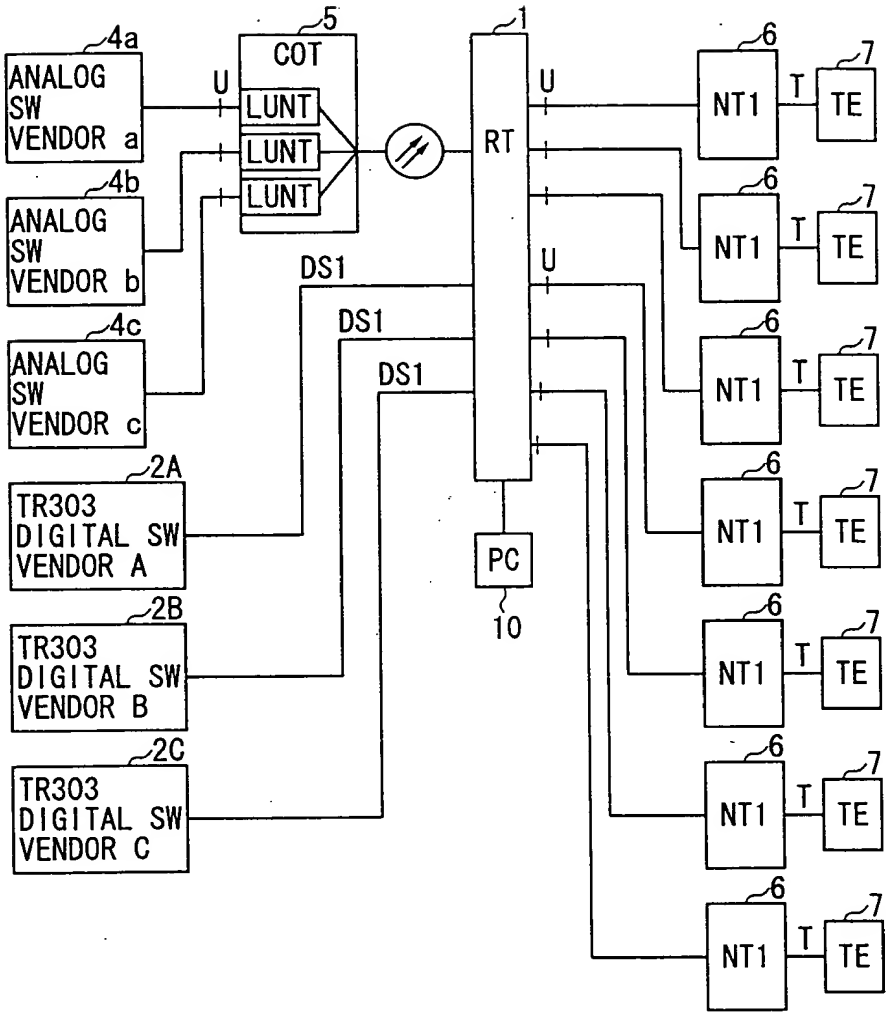
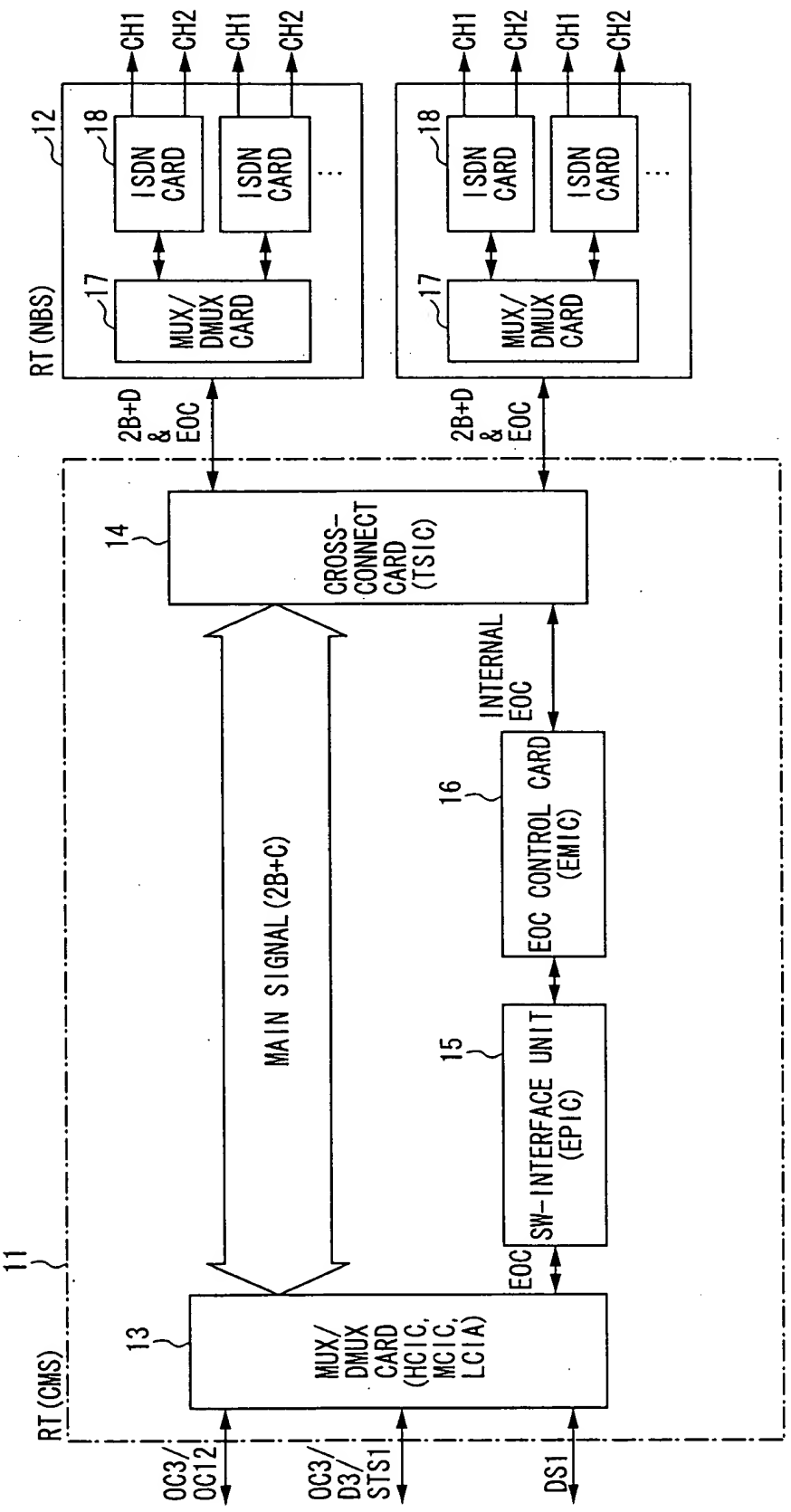

4a
ANALOG SW VENDOR a
4b
ANALOG SW VENDOR b
4c
ANALOG SW VENDOR c
2A
TR303 DIGITAL SW VENDOR A
2B
TR303 DIGITAL SW VENDOR B
2C
TR303 DIGITAL SW VENDOR C
5
COT
U
LUNT
LUNT
LUNT
DS1
DS1
DS1
1
RT
U
U
PC
10
6
NT1
T
7
TE

FIG.2


RT (CMS)
11
RT (NBS)
12
13
MUX/
DMUX
CARD
(HC1C,
MC1C,
LC1A)
14
CROSS-
CONNECT
CARD
(TS1C)
15
SW-INTERFACE UNIT
(EP1C)
16
EOC CONTROL CARD
(EM1C)
17
MUX/
DMUX
CARD
18
ISDN
CARD
CH1
CH2
2B+D
&
EOC
INTERNAL
EOC
MAIN SIGNAL (2B+C)
EOC
OC3/
OC12
OC3/
D3/
STS1
DS1

JP 2002-335260

FIG.3

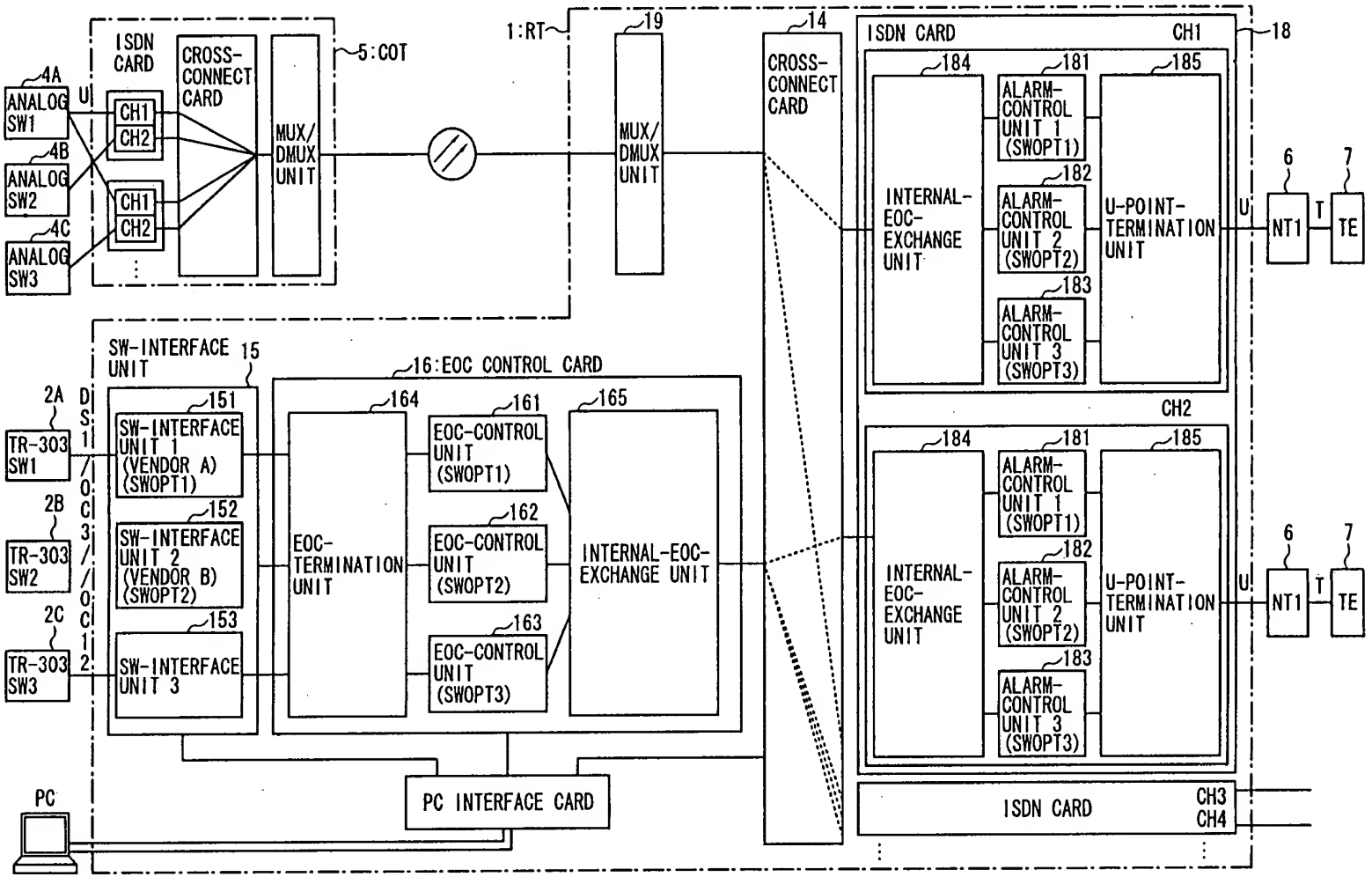
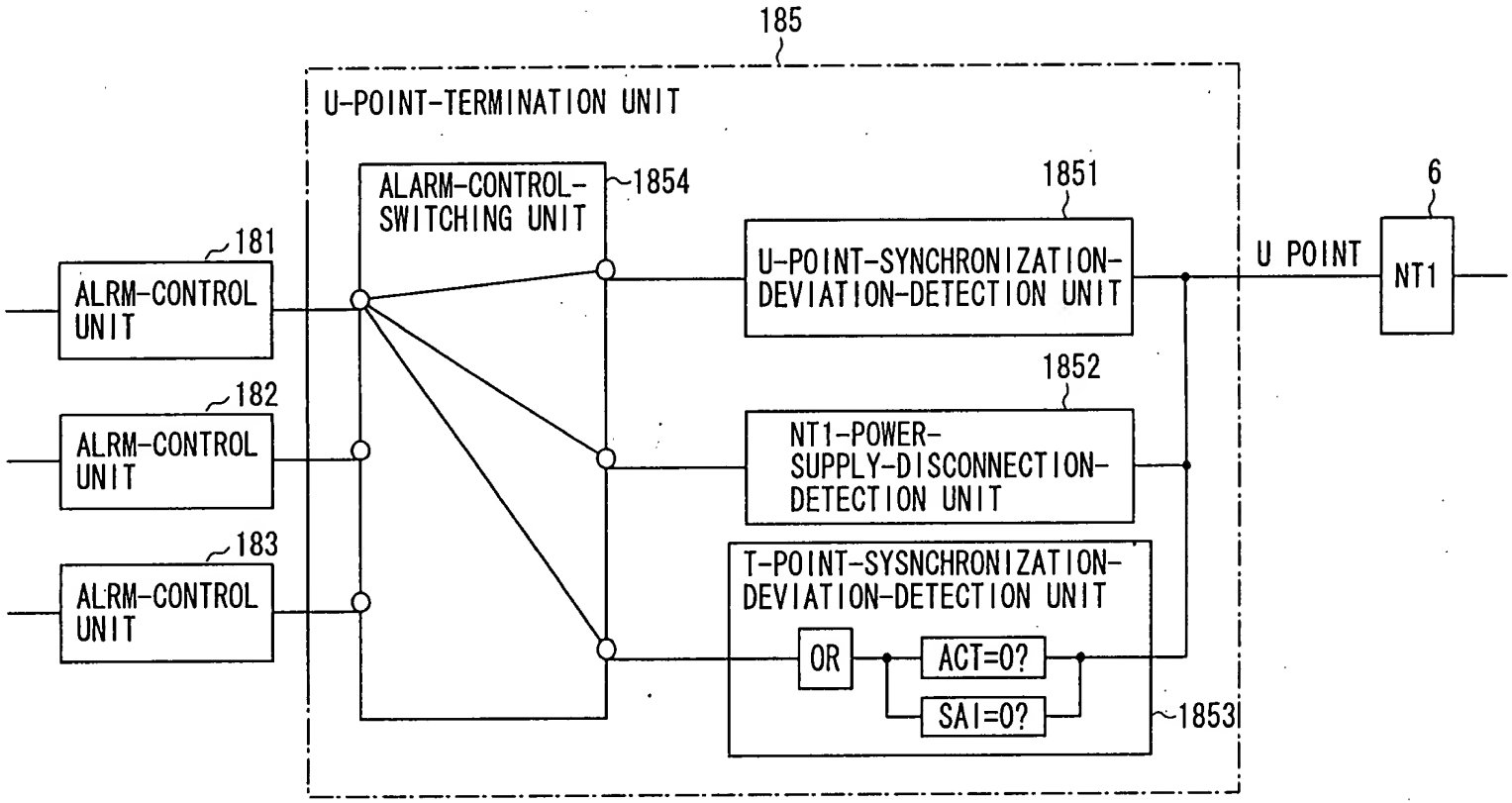


FIG.4


185
U-POINT-TERMINATION UNIT
ALARM-CONTROL-SWITCHING UNIT
1854
1851
6
181
ALRM-CONTROL UNIT
U-POINT-SYNCHRONIZATION-DEVIATION-DETECTION UNIT
U POINT
NT1
182
ALRM-CONTROL UNIT
1852
NT1-POWER-SUPPLY-DISCONNECTION-DETECTION UNIT
183
ALRM-CONTROL UNIT
T-POINT-SYSNCHRONIZATION-DEVIATION-DETECTION UNIT
OR
ACT=0?
SAI=0?
1853

0021-3T-9965260

FIG.5

STATUS	SWOPT=1 (VENDOR A&C)	SWOPT=2 (VENDOR B)	SWOPT=3 (NO VENDOR) (DEFAULT SETTING)
LOSS OF U-POINT SYNCHRONIZATION	1. TRANSMIT ALARM STATUS CHANGE REPORT (AT TIME OF RETRIEVE: LT OH='0111 1111 111'b NT OH='0000 0000 000'b)	1. TRANSMIT ALARM STATUS CHANGE REPORT 2. TRANSMIT NT1 OVERHEAD CHANGE REPORT LT OH='0111 1111 111'b NT OH='000x x101 111'b (x:SAME AS BEFORE LOSS OF U-POINT SYNC.)	1. TRANSMIT ALARM STATUS CHANGE REPORT LT OH='1111 1111 111'b, NT OH=THE VALUE RECEIVED FROM NT1 (SAME SETTING AS OLD-VERSION SOFTWARE)

FIG.6

STATUS	SWOPT=1 (VENDOR A&C)	SWOPT=2 (VENDOR B)	SWOPT=3 (NO VENDOR) (DEFAULT SETTING)
DISCONNECTION OF POWER SUPPLY TO NT1	1. TRANSMIT ALARM STATUS CHANGE REPORT (AT TIME OF RETRIEVE: LT OH='0111 1111 111'b NT OH='0000 0000 000'b)	1. TRANSMIT ALARM STATUS CHANGE REPORT 2. TRANSMIT NT1 OVERHEAD CHANGE REPORT LT OH='0111 1111 111'b NT OH='000x x101 111'b (x:SAME AS BEFORE DISCONNECTION OF NT1 POWER SUPPLY)	1. TRANSMIT ALARM STATUS CHANGE REPORT LT OH='1111 1111 111'b, NT OH=THE VALUE RECEIVED FROM NT1 (SAME SETTING AS OLD-VERSION SOFTWARE)

FIG.7

STATUS	SWOPT=1 (VENDOR A&C)	SWOPT=2 (VENDOR B)	SWOPT=3 (NO VENDOR) (DEFAULT SETTING)
LOSS OF T-POINT SYNCHRONIZATION	1. TRANSMIT NT1 OVERHEAD CHANGE REPORT (AT TIME OF RETRIEVE: LT OH='1111 1111 111'b NT OH='0xxx xxxx xxx'b) (x:SAME AS BEFORE LOSS OF T-POINT SYNC.)	1. TRANSMIT NT1 OVERHEAD CHANGE REPORT LT OH='1111 1111 111'b NT OH='0xxx xx0x xxx'b (x:SAME AS BEFORE LOSS OF T-POINT SYNC.)	1. TRANSMIT ALARM STATUS CHANGE REPORT LT OH='1111 1111 111'b, NT OH=THE VALUE RECEIVED FROM NT1 (SAME SETTING AS OLD-VERSION SOFTWARE)

FIG.8

STATUS	SWOPT=1	SWOPT=2	SWOPT=3
NO CH CARD IN SLOT	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME OF NO CH CARD	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME OF NO CH CARD	TRANSMIT M_EVENT_REPORT OF LINE TERMINATION AT TIME OF NO CH CARD
	TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=0	TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m47=0 m44, m45, m46, m48, m51, m52, m61=1	TRANSMIT NT1 OVERHEAD CHANGE REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m45, m46, m47, m48, m51, m52, m61=0
	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING IN PRESENCE OF CH CARD	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING IN PRESENCE OF CH CARD	TRANSMIT M_EVENT_REPORT OF LINE TERMINATION IN PRESENCE OF CH CARD
	TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X (X: VALUE RECEIVED FROM U POINT)	TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X (X: VALUE RECEIVED FROM U POINT)	TRANSMIT NT1 OVERHEAD CHANGE REPORT VALUE IS NT OH NEW STATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X (X: VALUE RECEIVED FROM U POINT)
	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="00011101111"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED

FIG.9

STATUS	SWOPT=1	SWOPT=2	SWOPT=3
LOSS OF U-POINT SYNCHRONIZATION		TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X(X:VALUE RECEIVED FROM U POINT)	TRANSMIT OF NT1 OVERHEAD CHANGE REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X(X:VALUE RECEIVED FROM U POINT)
	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS
		TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m47=0 m46, m48, m51, m52, m61=1, m44, m45=SAME VALUE AS BEFORE	TRANSMIT CHANGE OF OVERHEAD AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=0
	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS
	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="0001X101111"b (X=SAME VALUE AS BEFORE) AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED

FIG.10

STATUS	SWOPT=1	SWOPT=2	SWOPT=3
DISCONNECTION OF NT1 POWER SUPPLY		TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X (X:VALUE RECEIVED FROM U POINT)	TRANSMIT OF NT1 OVERHEAD CHANGE REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=X (X:VALUE RECEIVED FROM U POINT)
	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM NORMAL STATUS TO ALARM STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM NORMAL STATUS TO ALARM STATUS
		TRANSMIT M_EVENT_REPORT OF CHANGE OF OVERHEAD BIT REPORT AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m47=0 m46, m48, m51, m52, m61=1, m44, m45=SAME VALUE AS BEFORE	TRANSMIT CHANGE OF OVERHEAD AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS VALUE IS NT OH NEWSTATE: m41, m42, m43, m44, m45, m46, m47, m48, m51, m52, m61=0
	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS	TRANSMIT M_EVENT_REPORT OF EVENT REPORTING AT TIME WHEN U-POINT CONDITION CHANGES FROM ALARM STATUS TO NORMAL STATUS
	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="0001X101111"b (X=SAME VALUE AS BEFORE) AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="00000000000"b AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED

FIG.11

STATUS	SWOPT=1	SWOPT=2	SWOPT=3
LOSS OF TE SYNCHRONIZATION	LT OH STATES="01111111111"b, NT OH STATES="0XXXXXXXXXX"b (X=SAME ALUE AS BEFORE) AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="0XXXXX0XXXX"b (X=SAME VALUE AS BEFORE) AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED	LT OH STATES="01111111111"b, NT OH STATES="0XXXXXXXXXX"b (X=SAME VALUE AS BEFORE) AT TIME WHEN M-GET OF ISDN FPT IS EXCUTED

FIG.12

	SWOPT1
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	CHANGE OF OVERHEAD BIT REPORT
RELATED OBJECT CLASS	ISDN FRAMING PATH TERMINAL
EVENT ARGUMENT	OLD STATUS NEW STATUS
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	EVENT REPORTING
RELATED OBJECT CLASS	ANALOG LINE TERMINAL ATT ISDN FRAMING PATH TERMINAL DSI FRAMING PATH TERMINAL APPARATUS APPARATUS HOLDER ISDN FRAMING PATH TERMINAL ISDN LINE TERMINAL NETWORK ELEMENT MEMORY
EVENT ARGUMENT	PROBLEM TYPE ALARM SEVERITY DATA ON PROBLEM MONITOR ATTRIBUTE

FIG.13

	SWOPT2
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	CHANGE OF OVERHEAD BIT REPORT
RELATED OBJECT CLASS	ISDN FRAMING PATH TERMINAL
EVENT ARGUMENT	OLD STATUS:NTOH STATUS NEW STATUS:NTOH STATUS
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	EVENT REPORTING
RELATED OBJECT CLASS	ALARM COUNT LIST ANALOG LINE TERMINAL CIRCUIT PACK DSI FRAMING PATH TERMINAL DSI LINE TERMINAL APPARATUS APPARATUS HOLDER IDLC DATA LINK PROFILE IDLC DATA LINE TERMINAL ISDN FRAMING PATH TERMINAL ISDN LINE TERMINAL NETWORK ELEMENT MEMORY METALIC TEST ACCESS UNIT
EVENT ARGUMENT	PROBLEM TYPE PROBLEM INFORMATION ATTRIBUTE INFORMATION ON PROBLEM

FIG.14

	SWOPT3
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	CHANGE OF OVERHEAD BIT REPORT
RELATED OBJECT CLASS	ISDN FRAMING PATH TERMINAL
EVENT ARGUMENT	OLD STATUS NEW STATUS
CMISE SERVICE	M EVENT REPORT
EVENT TYPE	EVENT REPORTING
RELATED OBJECT CLASS	ANALOG LINE TERMINAL ATT ISDN FRAMING PATH TERMINAL DSI FRAMING PATH TERMINAL APPARATUS APPARATUS HOLDER ISDN FRAMING PATH TERMINAL ISDN LINE TERMINAL NETWORK ELEMENT MEMORY
EVENT ARGUMENT	PROBLEM TYPE ALARM SEVERITY DATA ON PROBLEM MONITOR ATTRIBUTE

0827EP 9999E260

FIG.15

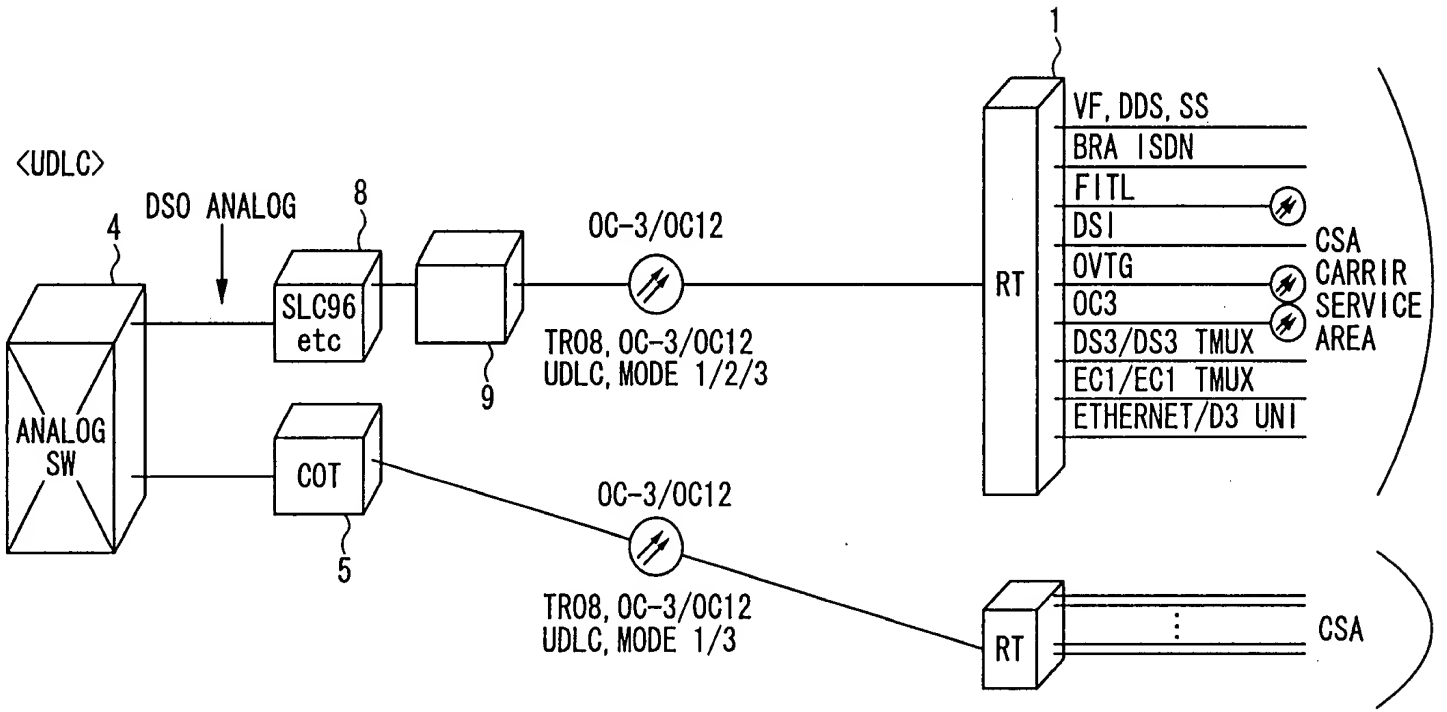


FIG.16

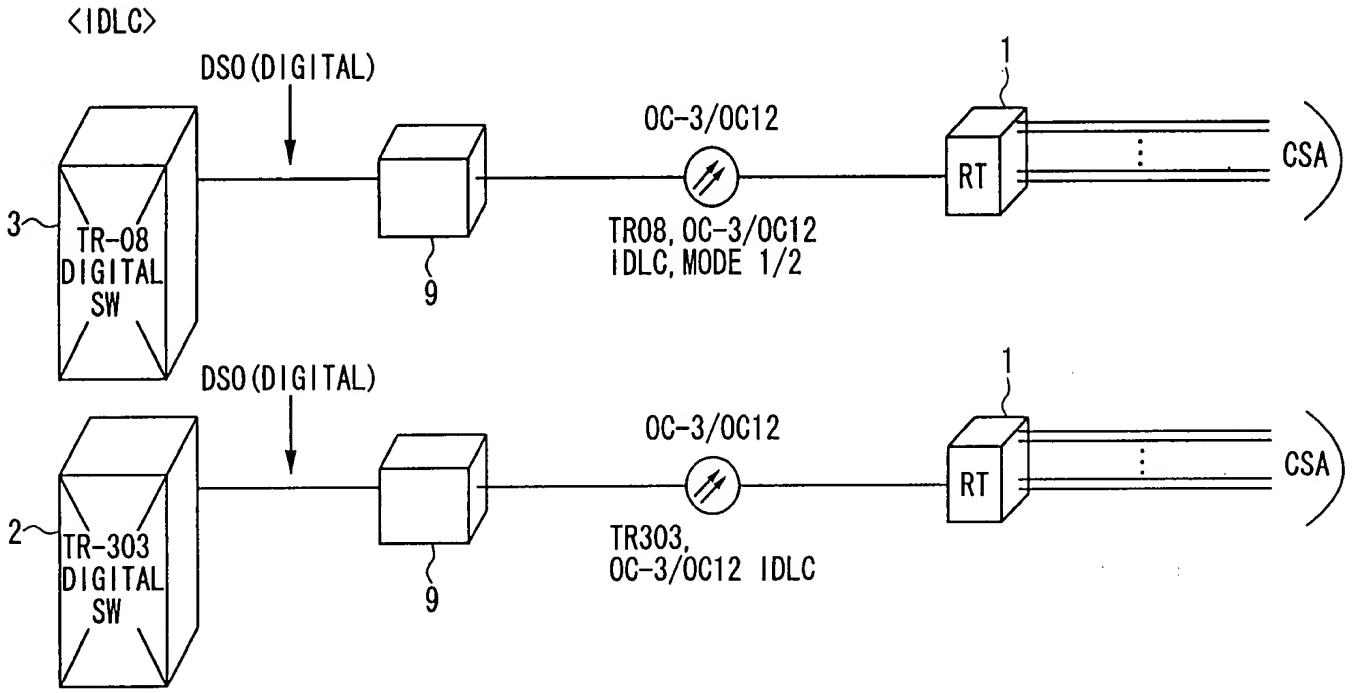
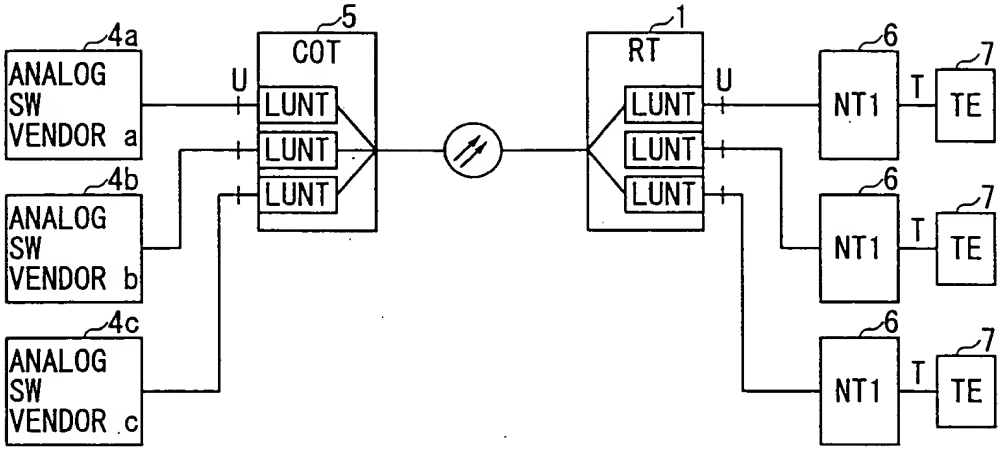

<IDLC>
DS0(DIGITAL)
3
TR-08
DIGITAL
SW
9
OC-3/OC12
TR08, OC-3/OC12
IDLC, MODE 1/2
1
RT
CSA
DS0(DIGITAL)
2
TR-303
DIGITAL
SW
9
OC-3/OC12
TR303,
OC-3/OC12 IDLC
1
RT
CSA

FIG.17


4a
ANALOG SW VENDOR a
4b
ANALOG SW VENDOR b
4c
ANALOG SW VENDOR c
5
COT
U
LUNT
LUNT
LUNT
1
RT
LUNT
LUNT
LUNT
U
6
NT1
T
7
TE
6
NT1
T
7
TE
6
NT1
T
7
TE